Exponential Functions

1. Use a graphing calculator to help answer the questions.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Equation | Initial Value | Growth Factor | Increase/Decrease | y-intercept |
| Y=2x |  |  |  |  |
| Y=5x |  |  |  |  |
| Y=(1/2)x |  |  |  |  |
| Y=2-x |  |  |  |  |
| Y=(1/5)x |  |  |  |  |
| Y=5-x |  |  |  |  |
| Y=2\*3x |  |  |  |  |

Questions

2. What single point do the first 6 equations have in common? Why?

3. As the growth factor increases, what happens to the graph?

4. Describe the graph when the growth factor is between 0 and 1.

5. How does the graph of the first equation compare with the graph of the third equation?

6. How does the graph of the third equation compare with the graph of the fourth equation?

7. How would you change the graph y=3x so that it flips across the y-axis?

8. Why does the last equation have a different y-intercept?